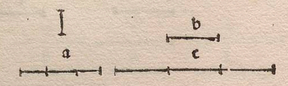
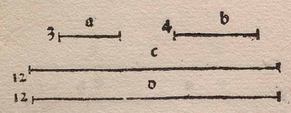


ad.f.igitur ecõuerſo.c.ad.a.ꝛ.e.ſicut.f.ad.c.ꝛ.f.per equã itaqꝫ ꝓportionalitatem erit.b.ad.a.ꝛ.e.ſicut.d.ad.c.ꝛ.f.qõ erat ꝓpoſitũ.Ex hoc quoqꝫ manifeſtũ ẽ qꝫ ſi fuerit ꝓportio quotlibet numeroꝝ ad ꝓmũ ſicut totidem alioꝝ ad ſcõm.erit aggregati ex omnibus antecedentibus ad ꝑmũ: ad ꝑmũ ſicut aggregati ex oibus añtib⁹ ad ſcõm:ad ſcõm.itẽqꝫ ecõuerſo ſi fuerit ꝓportio ꝑmi ad quotlibet numeros ſicut ſcõi ad totidẽ alios:erit ꝓmi ad aggregatũ ex oib⁹ ꝑñtib⁹ ad ipſũ: ſicut ſcõi ad aggregatũ ex oib⁹ ꝑñtib⁹ ad ipſũ. ℙropoſitio .16.

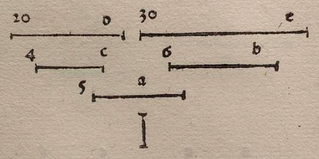
SI numeret vnitas aliquẽ numeꝝ quotiẽs quilibet tertius aliquẽ quartũ:erit quoqꝫ ꝑmutati ut quotiẽs vnitas numerat tertium totiens ſecũdus numeret quartum.

¶Vt ſi ſit vnitas ad.a.ſicut.b.ad.c.erit ꝑmutatim vnitas ad. b.ſicut.a.ad.c.Non ſupfluit aũt hec demonſtrata ꝑmutata ꝓportione. non eni ex illa põt cõcludi qõ hic ꝓponitur.Nã illa demonſtrata eſt de.4.numeris ꝓportionalibus:vnitas vero nõ eſt numerus p diffinitionẽ:hoc ergo mõ patet ꝓpoſitum.diuidat̃.a.p vnitates ꝛ.c.ꝑm quãtitatem.b.eruntqꝫ per preſentem ypothe.tot ptes.a.quot.c.ꝛ quia vnaq̃qꝫ partiũ.a .eſt vnitas ꝛ vnaq̃qꝫ ptium.c. eſt equalis.b.erit ut quotiens vnitas in.b.totiens vnaq̃qꝫ ptiũ.a.in ſua cõpari ex ptib⁹.c.p modũ itaqꝫ demõſtratiõis.5.ſequet̃ totiens eſſe.a.in.c.quotiens vnitas in.b.qõ eſt ꝓpoſitum. ℙropoſitio .17.



SI duoꝝ numeroꝝ vterqꝫ ducatur in alterum :qui inde ꝓducentur erunt equales.

¶Sicut ſi ex.a.in.b.ꝓueniat.c.ꝛ ex.b.in.a.ꝓueniat.d.erunt.c.ꝛ.d equales:cũ eni.b.multiplicatus p.a.ꝓducat.c.erit p cõuerſionẽ diffinitionis.b.in.c.quotiens vnitas in.b.ꝛ qꝫ totiens eſt.a.etiã in.d.qꝫ ex.b.in.a.fit.d.ſequitur ut totiẽs ſit.a.i.c.quotiẽs in.d.p concept.igitur.c.ꝛ.d.ſunt ſimiles. Poſſumus quoqꝫ hanc concluſionem alio modo ꝓponere:ſi duoꝝ numeroꝝ vterqꝫ ducaſ̃ in alterũ idẽ numerus vtrobiqꝫ ꝓueniet:vt ſi ex.a.in.b.ꝓueniat.c.idẽ etiã ex.b.in.a. ꝓueniet:qꝫ eni ex.a.in.b.fit.c.erit ut ꝓius p cõuerſionẽ diffinitionis.b.in.c.quotiens vnitas in.a.Et permutatim p premiſſam.a.in.c. quotiens vnitas in. b. quia igiſ̃.a.totiens ſibi coaceruaſ̃ in.c.quotiens in.b.eſt vnitas:ſequiſ̃ p diffinitionem qꝫ ex.b.in.a.fit.c. ℙropoſitio .18.



SI vnus numerus in duos ducatur:tantus erit duoꝝ inde ꝓductoꝝ alter ad alterum:quantus duoꝝ multiplicatoꝝ alter ad alterum.

¶Multiplicet.a.vtrũqꝫ duoꝝ nũeroꝝ.b.et.c.ꝛ ꝓueniãt.d.ꝛ.e.dico qꝫ erit ꝓportio.d.ad.e.ſicut.b.ad.c.ſequiſ̃ eni p cõuerſionẽ diffinitionis eius qõ eſt multiplicari ut.b.in.d.ꝛ.c.in.e.ſit quotiens vnitas in.a. quare p diffinitionẽ ꝓportio.d.ad.b.ẽ ſicut.e.ad.c.equaliter eni eos continent. qꝫ quotiens.a.vnitatẽ:ergo permutatim.d.ad.e.ſicut.b.ad.c.quod eſt ꝓpoſitum.

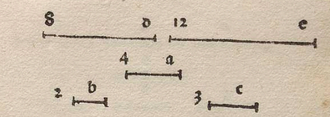
ℙropoſitio .19..

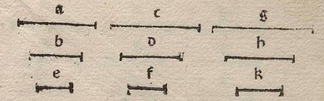
SI duo numeri vnum multiplicent :erit ꝓportio duoꝝ inde ꝓductoꝝ tanq̃ duoꝝ multiplicantium.

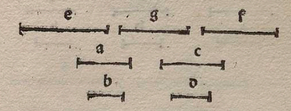
¶Ex converſione antecedentis premiſſe concluditur hec eadẽ paſſio que in premiſſa:vt ſi vterqꝫ duoꝝ numeroꝝ.b. ꝛ.c. multiplicet.a.et ꝓueniant.d.ꝛ.e.erit.d.ad.e.ſicut.b.ad.c.erit eni ꝑ ante ꝑmiſſã ut ex.a.in.b.ꝛ.c fiãt.d.ꝛ.e:qre p premiſſã.d.ad.e.ſicut.b.ad.c.qõ ẽ ꝓpoſitũ:¶Potes aũt qõ ꝓponit p hanc ꝛ ꝑmiſſã de duobus numeris ad quotlibet numeros ampliare :qꝫ ſi vnus multiplicet quotlibet erit ꝓductoꝝ ꝛ multiplicatoꝝ vna ꝓportio.Silr quoqꝫ ſi quotlibet multiplicẽt vnũ erit ꝓductoꝝ ꝛ multiplicantium vna ꝓportio qõ p hãc ꝛ premiſſã quotiens oportuerit repetitas facile ꝓbabis. Hic aũt ut ſupra pollitici ſumus demõſtrare volumus equã ꝓportionalitatẽ in quotlibet numeris duoꝝ ordinũ indirecte ꝓportionalitatis quã demõſtrat euclides p.23.quinti i quantitatibus in genere:vicim⁹ igitur quoniã.

¶Si quotlibet numeri totidẽ alijs fuerint indirecte proportionales extremi quoqꝫ in eadem ꝓportione proportionales erunt.

¶Vt ſi ſit.a.ad.b.ſicut.d.ad.f.ꝛ.b.ad.e.ſicut.c.ad.d.erit.a. ad.c. ſicut.c. ad.f. ducatur eni.c.in.d.ꝛ.f.ꝛ prouenient.g.ꝛ.b.eritqꝫ per premiſſam.g.ad.b. ſicut.d ad.f.quare ꝛ ſicut.a.ad.b.ducaſ̃.itẽ.f.in.d.ꝛ ꝓueniat.k.eritqꝫ per banc. 19.g.ad k.ſicut.c.ad. f.ꝛ qꝫ ex.f.in.d.fit.k. fiet idem cõuerſo p.10.ex.d. in.f. quia igiſ̃ ex c.ꝛ.d.in.f.fiunt.b.ꝛ.k.erit p hanc.19.b.ad.k.ſicut.c.ad.d.quare ſicut. b.ad.c .et qꝫ iam oſtenſum eſt qꝫ ẽ.g.ad.b.ſicut.a.ad.b.erit p.15.a.ad.e.ſicut.g.ad.k.ſed ſic erat etiam.c.ad.f.eſt igitur.a.ad.e.ſicut.c.ad.f.quod eſt ꝓpoſitum. Idem ꝓbabis ſi fuerint in vtroqꝫ ordine numeri plures tribus quẽadmodum probatur in 23.quinti de quantitatib⁹ plurib⁹ trib⁹.







ℙropoſitio .20.

SI fuerint quatuoꝝ numeri ꝓportiõales qõ ex ductu primi in vltimũ ,ducetur equũ erit ei qõ ex ductu ſecundi in tertiũ. Si vero qõ ex primo i vltimũ ,ducaſ̃ equũ ẽ ei qõ ex ſecundo in tertiũ:illi quatuoꝝ numeri ſũt ꝓportiõales.

¶Quod propoſuit euclides per.15.ſexti de quatuoꝝ lineis ꝓportionalibus:ꝓponit hic de quatuoꝝ numeris ꝓportionalibus.verbi gratia. Sit ꝓportio.a.ad.b.ſicut.c.ad.d.fiatqꝫ ex.a.in.d.e.ꝛ ex.b.in.c.f.dico qꝫ.e.ꝛ.f.ſunt equales econuerſo:ducatur enim.a.in.b.ꝛ fiat.g.eritqꝫ per.18.g.ad.c.ſicut.b.ad.d. et qꝫ per.17.ex.b.in.a.fit.g.ꝛ ex eodẽ.b.i.c.f.erit p.18.g.ad.f.ſicut.a.ad.c.ſed p.14. eſt.a.ad.c.ſicut.b.ad.d.ergo erit.g.ad.f.ſicut.g.ad.e.eq̃les igiſ̃ ſũt.f. ꝛ.e. qõ eſt ꝑmũ. Nec oportet ꝑdemõſtrare ſi vni⁹ numeri ad duos ſit vna ꝓportio qꝫ ipſi ſũt eq̃les:aut ſi ipſi ſũt eq̃les qꝫ vni⁹ ad ipſos ſit vna ꝓportio. Si enim eſt vna proportio.g.ad.e.ꝛ ad.f.aut ipſe erit tota pars vel partes.c. quota vel quote idem eſt.f.ꝛ tunc per conceptionem patet.e.ꝛ.f.eſſe eq̃les:aut totiens.g. continebit.e. quotiens.f.ꝛ ſuperfluent in eo tota pars vel partes.e. quota vel quote in eodem ſuperfluent .f.ꝛ tũc etiam per conceptionẽ patet cos eſſe equales. Qõ ſi ipſi fuerint equales patet per conceptionẽ qꝫ aut.g.erit tota pars vel partes.e.quota vel quote.f.ꝛ tunc per diffinitionem erit ipſius.g.ad vtrumqꝫ eorum ꝓportio vna. aut equaliter continebit vtrunqꝫ cum ſuperfluitate ſimilium ꝛ tot numero partium:ꝛ tunc etiam per diffinitionem erit eius ad vtrunqꝫ proportio vna. ¶Secundũ ſic patet:ſit.e.productus ex.a.in.d.equalis.f. ꝓducto ex.b.in.c.dico qꝫ ꝓportio.a.ad.b.eſt ſicut.c.ad.d.ꝛ eſt hec converſa prime partis. Sit enim vt prius